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10/068,007	02/08/2002	Shigenori Fukasawa	Q68471	6451

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EXAMINER

HSIEH, SHIH WEN

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 01/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,007

Applicant(s)

FUKASAWA ET AL.

Examiner

Shih-wen Hsieh

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 7 and 13 are objected to because of the following informalities:

In regard to:

Claim 7:

Line 16, please change "the regulating operation" into "a regulating operation".

Because the term "regulation operation" is first time recited.

Claim 13:

Line 19, please change "in the case" into "in a case". Because the term "case" is first time recited.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 2861

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,315,468 B2 ('468). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a platen gap adjuster/platen-gap regulating device, which are used to relate a print head cleaning operation to the platen gap information. Below is a table, which tabulates claims from both cases for comparison:

<u>10/068,007</u>	<u>6,315,468 B2</u>
<p>1. An ink jet recording apparatus comprising: an inkjet recording head mounted on a carriage for jetting ink droplets in accordance with print data; and a capping device for capping a nozzle forming surface of the recording head; wherein when the carriage is moved to a mount portion where the capping device is mounted, the capping device is moved toward the nozzle forming surface of the recording head by receiving a driving force which moves the carriage, so that the capping device caps the nozzle forming surface; and a stopping position of the carriage in the mount portion of the capping device is adjusted based on adjustment information of a platen gap adjuster.</p> <p>5. An ink jet recording apparatus according to claim 1, wherein a flushing position where the capping device is located</p>	<p>1. An inkjet recording apparatus comprising: ink jet recording heads for discharging ink droplets in accordance with print data; a capping unit which seats said recording heads and for receiving a negative pressure from a suction pump, a cleaning member for wiping a nozzle opening surface of said recording heads; a platen-gap regulating means for adjusting a space between the recording heads and a printing medium in proportion to the thickness of the printing medium, and a control mean for driving said platen-gap regulating means to hold a fixed relative position between the recording heads and said capping means and the recording heads and said cleaning member when said recording heads are located in a cleaning position.</p>

opposite to the nozzle forming surface of the recording head <u>with a predetermined interval</u> and a capping position where a nozzle forming surface of the recording head is capped by the capping device, are set based on adjustment information of the platen gap adjuster.	
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In viewing of the above table the variance of the platen gap is done by a platen gap adjuster in the instant application. While in patent ('468), it is done by a platen-gap regulating device. Although the terms used are differently, nevertheless, both perform the same function.

A stopping position of the carriage in the mounting portion of the capping device in the instant application is equivalent to a control means for driving said platen-gap regulating means to hold a fixed relative position between the recording heads and said capping means and the recording heads and said cleaning member when said recording heads are located in a cleaning position.

Therefore it would have been obvious to a person having ordinary skill in the art to understand that although the terms used are differently and the way the relative position between the heads and the capping device are recited differently, nevertheless, the function being performed and the spirit of the invention of the instant application and the patent ('468) are the same.

For claim 5, the underlined portion is also similar to the control portion in the patent ('468). Because the flushing position and the capping position in the instant application still correspond to a fixed relative position between the recording heads and said capping means and the recording heads and said cleaning member when said

Art Unit: 2861

recording heads are located in a cleaning position, which is, however, recited in a broad sense. Or "the fixed position" encompasses both the capping and flushing positions.

4. Claims 9 and 11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,315,468 B2 ('468). Although the conflicting claims are not identical, they are not patentably distinct from each other because both cases deal with a platen gap adjuster/ platen-gap regulating device, which are used to relate a print head cleaning operation to the platen gap information. Below is a table, which tabulates claims from both cases for comparison:

<u>10/068,007</u>	<u>6,315,468 B2</u>
9. A moving position control method of a capping device adapted to an ink jet recording apparatus comprising an ink - jet recording head mounted on a carriage for jetting ink droplets in accordance with print data, and the capping device capable of capping a nozzle forming surface of the recording head, wherein when the carriage is moved to a mount portion where the capping device is mounted, the capping device is moved toward the nozzle forming surface of the recording head by receiving driving force of the carriage, the moving position control method comprising the steps of: judging a flushing requirement as to whether or not the flushing operation is required; acquiring a platen gap adjustment information from a platen gap adjuster if the flushing operation is required; adjusting an interval	3. A head cleaning control method in the ink head recording apparatus which comprises ink jet recording heads for discharging ink droplets onto a printing medium in accordance with print data, a capping unit for sealing said recording heads and for receiving a negative pressure from a suction pump, and a cleaning member for wiping the nozzle opening surface of said recording heads, said head cleaning control method comprising the steps of: judging a gap between said nozzle opening surface and said capping unit upon receiving a cleaning instruction for said recording heads; <u>controlling said gap to be a predetermined distance in proportion to the thickness of the printing medium</u> ; and cleaning said recording heads with one of said capping means and said cleaning

<p>between the nozzle forming surface of the recording head and the capping device at a flushing position by controlling the moving position of the carriage to a mount portion of the capping device based on the platen gap adjustment information; and flushing ink droplets from the recording head into the capping device, while maintaining the interval.</p> <p>11. A moving position control method of a capping device adapted to an ink jet recording apparatus comprising an ink jet recording head mounted on a carriage for jetting ink droplets in accordance with print data and a capping device for capping a nozzle forming surface of the recording head, wherein when the carriage is moved to a mount portion where the capping device is mounted, the capping device is moved toward the nozzle forming surface of the recording head by receiving driving force of the carriage, the moving position control method comprising the steps of: judging a capping requirement as to whether or not the ink jet recording head is required to be advanced to a capping condition; acquiring a platen gap adjustment information from a platen gap adjuster if the capping operation is required; and controlling the moving position of the carriage to a mount portion of the capping device based upon the platen gap adjustment information.</p>	<p>member upon completing said gap control step.</p>
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The discussions of the variance are as discussed above. However, the underlined portion in the patent ('468) is obvious. Because it would have been obvious to a person having ordinary skill in the art to understand that when a thickness of a print medium varies, a gap between the platen and the medium has to be adjusted accordingly in order to accommodate the medium.

Art Unit: 2861

Claims other than those rejected under double-patenting rejection and objected (allowable subject matter) and allowed claims are well known in the art and can be rejected by an art rejection. Examiner will do so, if Applicant feels it is necessary.

Allowable Subject Matter

5. Claims 12-15 and 16-18 are allowed.

6. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

In regard to:

Claim 6:

The primary reason for the allowance of claim 6 is the inclusion of the limitations of in the case that the adjustment information of the platen gap adjuster indicates that a platen gap is small, the guide projection formed on the slider is regulated to be retained at a lower position within the guide groove formed in the frame under inclined condition at each of the flushing position and the capping position, as compared with such a case that the adjustment information of the platen gap adjuster indicates that a platen gap is

Art Unit: 2861

large. It is these limitations found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claims 12-15:

The primary reason for the allowance of claims 12-15 is the inclusion of the limitation of when a flushing operation is carried out in the flushing area, the flushing control unit adjusts an ink jetting amount of one dot during the flushing operation based upon adjustment information of a platen gap adjuster. It is these limitation found in each of the claims, as they it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Claims 16-18:


The primary reason for the allowance of claims 16-18 is the inclusion of the method step of an ink amount setting step for setting an ink jetting amount of one dot during a flushing operation based on platen gap adjustment information in such a case that the flushing requirement judging step judges that the flushing operation is required. It is this step found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Art Unit: 2861

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 703-305-4961. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Fuller can be reached on 703-308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Shih-wen Hsieh
Examiner
Art Unit 2861

SWH



January 21, 2003